MARCH 30, 2007

GROUNDWATER MONITORING DATA SUBMITTAL
FIRST QUARTER 2007
QUARTERLY GROUNDWATER MONITORING PROGRAM
NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACILITIES NO. H-000536 AND H-000540
BMI COMPLEX
HENDERSON, NEVADA

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

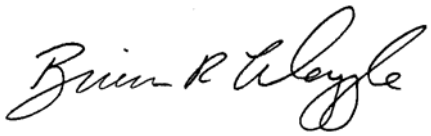
JURAT

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances.

For the services provided and attested to with this Jurat including the preparation of this data submittal.

I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

HARGIS + ASSOCIATES, INC.



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No. EM - 1903 (Expires 05/27/08)

Date Signed: March 30, 2007

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ACRONYMS AND ABBREVIATIONS

EPA	U.S. Environmental Protection Agency
GWTS	groundwater treatment system
H+A	Hargis + Associates, Inc.
Montrose	Montrose Chemical Corporation of California
NDEP	Nevada Division of Environmental Protection
RFQ	Request for Quotation
SOPs	Standard operating procedures
Stauffer	Stauffer Management Company LLC
TDS	Total dissolved solids
the Companies	Stauffer, Montrose, Syngenta Crop Protection, Inc., and Pioneer Americas, LLC
the Workplan	Quarterly Groundwater Monitoring Workplan, Revision 1.0
ug/l	Micrograms per liter
VOCs	volatile organic compounds

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1.0 INTRODUCTION

This groundwater monitoring data submittal presents data obtained during the first quarter 2007 quarterly groundwater monitoring event (the monitoring event). The monitoring event was conducted by Hargis + Associates, Inc. (H+A) on behalf of Stauffer Management Company LLC (Stauffer), Montrose Chemical Corporation of California (Montrose), Syngenta Crop Protection, Inc., and Pioneer Americas, LLC (the Companies). All groundwater sampling, and alluvial aquifer and second water-bearing zone water level measurements were conducted during the period January 11 through January 25, 2007. It was observed that some flowing third water-bearing zone monitor wells either had inoperable or no pressure gauges fitted on the wellheads. These monitor wells were fitted with operable pressure gauges during the monitoring event and were measured during the period March 5 though March 8, 2007.

The monitoring event was conducted in accordance with the Quarterly Groundwater Monitoring Workplan, Revision 1.0 (the Workplan) and the conditional approval of the Workplan by the Nevada Division of Environmental Protection (NDEP) in a letter dated August 30, 2006 (H+A, 2006; NDEP, 2006). The Workplan was subsequently revised based in part on discussions during a meeting with NDEP on September 27, 2006. These revisions were discussed in the previous data submittal (H+A, 2007).

The monitoring event consisted of the measurement of water level elevations and the collection of groundwater samples for laboratory chemical analysis from wells located within an area

encompassing the former Stauffer and Montrose facilities, and an area downgradient of the facilities to Las Vegas Wash, in Henderson, Nevada (the study area) (Figure 1). The purpose of the quarterly groundwater monitoring program is to collect data to assess potential seasonal variations in water level elevations and groundwater chemical concentrations within the study area (H+A, 2006). This monitoring event is the second of four planned quarterly events as outlined in the Workplan. Upon conclusion of the four events, all monitoring data will be summarized and discussed in a report and transmitted to NDEP.

NDEP provide comments to the fourth quarter 2006 data submittal in a letter to the Companies dated March 5, 2007 (NDEP, 2007). Responses to these comments are provided in Appendix A of this data submittal.

2.0 SCOPE

The scope of work includes the measurement of water levels at 52 monitor wells and the collection of groundwater samples from a subset of 38 monitor wells completed in the alluvial aquifer, second water-bearing zone, and third water-bearing zone within the study area. Monitor well locations are presented in Figure 1. The number and locations of the monitor wells were selected to provide site-wide spatial distribution of data to evaluate changes in water levels, contaminant migration patterns, seasonal changes in contaminant concentrations and concentration changes in the water-bearing zones.

This quarterly groundwater monitoring program is implemented concurrently with other routine groundwater monitoring activities conducted by the Companies. These additional activities include water level monitoring and groundwater sampling at an additional 29 monitor wells and extraction wells:

- Quarterly monitoring of two upgradient and three downgradient Consent Order monitor wells related to operation of the groundwater treatment system (GWTS);
- Quarterly monitoring of seven transect groundwater monitor wells related to operation of the GWTS immediately downgradient of the GWTS;
- Annual monitoring of the 13 groundwater extraction wells related to the GWTS, and
- Semi-annual monitoring of four monitor wells at the Montrose closed ponds area (Figure 1).

The results of these monitoring activities are routinely summarized and submitted to NDEP under separate cover.

3.0 WATER LEVEL MEASUREMENTS

Groundwater level measurements were conducted in accordance with the standard operating procedures (SOPs) provided in the Workplan (H+A, 2006). Water level measurements were obtained from all 52 monitor wells during the monitoring event, and 12 additional monitor wells designated as part of GWTS monitoring and Consent Order activities (Section 2.0).

During the monitoring event, a water level measurement was obtained from alluvial aquifer monitor well ARP-6A in place of missing monitor well PC-010. Alluvial aquifer monitor well PC-010 could not be located during the fourth quarter 2006 monitoring event (H+A, 2007). Monitor well ARP-6A is of the appropriate depth to monitor water levels in the alluvial aquifer and will serve as a replacement location for monitor well PC-010 for the remainder of these monitoring events.

Water level data obtained during the monitoring event are presented in Table 1. Field forms used during water level measurements are included in Appendix B. The water level data were used to prepare a water level elevation contour map for the alluvial (Figure 2). Figure 2 incorporates water level data measured in Consent Order and GWTS transect monitor wells. This allows for a more complete presentation of water level data for the study area during the first quarter 2007.

Water levels have been plotted for the second and third water-bearing zones; however the data have not been contoured because: 1) producing zones in the second water-bearing zones are believed to be discontinuous and of limited areal extent; and 2) all but one of the third water-bearing zone monitor wells are located in a linear pattern, which does not allow the data to be contoured (Figures 3 and 4).

Hydrographs of the groundwater elevations for monitor wells comprising each of the six monitoring transects are presented in Figures 5 through 10.

4.0 GROUNDWATER SAMPLING

Groundwater samples were collected in accordance with the SOPs provided in the Workplan with the exception of some monitor wells which required minor modification to the sampling technique (Section 5.0) (H+A, 2006). Groundwater samples were successfully obtained from all 38 designated monitor wells during the monitoring event.

Pursuant to the Workplan and conditional approval letter, groundwater samples were analyzed for:

- Volatile organic compounds (VOCs) using U.S. Environmental Protection Agency (EPA) Method 8260B;
- Semi-VOCs using EPA Method 8270C;
- Organochlorine pesticides using EPA Method 8081A;
- The organic acids dimethyl phosphorodithioic acid, benzenesulfonic acid, phthalic acid, diethyl phosphorodithioic acid, and 4-chlorobenzenesulfonic acid using high performance liquid chromatography;
- Resource Conservation and Recovery Act metals using EPA Methods 6010 and 6020, and
- Total dissolved solids (TDS) using EPA Method 160.1.

All analyses were conducted by Test America Laboratories, Inc., or other State of Nevada certified subcontractor laboratory. Water quality data obtained during the monitoring event are presented in Table 2. Field forms used during water level measurements are included in Appendix B, and laboratory analytical reports are included in Appendix C. Please note that Appendix C also includes analytical reports for GWTS transect well and Consent Order monitor wells sampling, as this monitoring event and the GWTS monitoring events are now completed concurrently. The results of transect and Consent Order monitor well sampling will be discussed in detail in an upcoming quarterly monitoring report for the GWTS area.

The water quality data were used to prepare water quality maps for the prevalent VOCs and other selected analytes for each of the water-bearing zones within the study area. The prevalent VOCs in the study area include chlorobenzene, benzene, chloroform, 1,2-dichlorobenzene, and 1,4-dichlorobenzene. The other selected analytes include arsenic, TDS, and beta-benzene hexachloride (Figures 11 through 34).

The alluvial aquifer water quality maps incorporate water quality data from the Consent Order and GWTS transect monitor wells. This allows for a more complete presentation of alluvial aquifer water quality data for the study area during the first quarter 2007. However, arsenic and TDS are not sampled for at the Consent Order and GWTS transect monitor wells, as the analytical schedule for these wells differ from that schedule used for the site-wide monitoring program. Beta-benzene hexachloride is analyzed for in samples collected at the GWTS transect wells.

Quality assurance/quality control sampling for the monitoring event consisted of the following:

- A trip blank for VOC analysis was submitted with each shipment to each laboratory where samples are to be analyzed for VOCs. Review of the analytical data indicate that no VOCs were detected during this sampling event (Appendix C).

- When non-dedicated groundwater sampling equipment is used, one equipment rinsate blank was collected during the first day and last day that groundwater sampling was performed. The equipment rinsate blanks were analyzed for VOCs. Review of the analytical data indicate that low level detections of chloroform were detected in both equipment rinsate blanks collected at the beginning of the sampling event (Appendix C). Chloroform was detected at concentrations of 2.7 and 4.7 micrograms per liter (ug/l), the detection limit for chloroform was 2 ug/l (Appendix C). One equipment rinsate blank collected at the end of the sampling event had detects of several compounds. These detects most likely were introduced by the previous sample which was collected from the well with concentrations of VOCs greater than 5,000 ug/l.

- Field duplicate samples were collected at a minimum frequency of one per 20 samples. Field duplicate samples were analyzed by the same analytical methods as was the original sample.

- A field blank for VOC analysis was collected at a minimum of one per sampling day. Review of the analytical data indicate that chloroform was reported sporadically in three field blanks at concentrations ranging from 2.6 to 5.4 ug/l (Appendix C). No other VOCs were detected.

Purge water generated during groundwater sampling was contained and will be characterized. After characterization, all purge water will be disposed of off-site at a licensed facility in accordance with federal, state, and local requirements.

5.0 VARIATIONS FROM WORKPLAN

Variations from the Workplan occurred during the monitoring event. These variations included:

- Drawdown during the sampling of some monitor wells exceeded the goal of minimal drawdown of less than 0.1 meters or approximately four inches (Appendix B). The wells are generally located in areas of the former Stauffer and Montrose facilities where the alluvial aquifer is not productive. The exceedence of the drawdown goal is a reflection of this condition.

- Due to the limited saturated thickness encountered at monitor well B-7, the well could not be sampled using a low-flow submersible pump. The groundwater sample was collected using a decontaminated polyethylene bailer.

6.0 REFERENCES

Hargis + Associates, Inc (H+A). 2006. Quarterly Groundwater Monitoring Workplan Revision 1.0; NDEP Facilities H-000536 and H-000540, BMI Complex, Henderson, Nevada. August 30, 2006.

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